

III. Remarks

Applicant appreciates the Examiner's indication of allowance of claims 23-50 and the allowability of claims 2, 3, 9, 15, 17, and 20. Claims 1, 15, and 20-22 have been amended. The rejections of the claims have been handled in the following manner:

Claims 1, 4-8, 10-14, 16, 18, 19, 21, and 22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Patent Publication (US2004/0166669) by Saito ("Saito") in view of Patent Publication (US2003/0054629) by Kawai, et al. ("Kawai").

The Examiner has indicated that claims 2, 3, 9, 15, 17, and 20 would be allowable if rewritten in independent form. Accordingly, claims 15 and 20 have been rewritten in independent form.

Claims 21 and 22 have been amended and now depend from amended claim 20, therefore they are allowable.

Claim 1 has been rewritten to include an element of claim 2. Applicant respectfully traverses any rejection of currently amended claim 1 based on a combination of the references cited above on the grounds that these references are defective in establishing a *prima facie* case of obviousness.

Claim 1 now additionally recites, "forming a protective film portion over at least the exposed portion of the conductive layer, the protective film portion being comprised of the elements C, H and O".

The PTO recognizes in MPEP § 2142 that, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the Examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness." It is submitted that, in the present case, the

Examiner cannot factually support a *prima facie* case of obviousness for the following three reasons.

1. Even When Combined, the References Do Not Teach the Claimed Subject Matter

The Saito and Kawai patent publications cannot be applied to reject claim 1 under 35 U.S.C. § 103 which provides that:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains . . . (Emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, the combination of Saito and Kawai does not teach, "forming a protective film portion over at least the exposed portion of the conductive layer, the protective film portion being comprised of the elements C, H and O". This lack of disclosure in the prior art is confirmed by the Examiner in the reasons for allowance, "there is no disclosure in the prior art of forming a protective film portion over at least the exposed portion of the conductive layer; the protective film portion being comprised of the elements C, H and O such as C₂H₄ or C₂H₆."

Thus, for this reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness cannot be met, and any rejection under 35 U.S.C. § 103 is not applicable to claim 1. Dependent claims 2-14 and 16-19 depend from and further limit independent claim 1. Therefore, claims 2-14 and 16-19 should also be allowable over Saito and Kawai.

2. The Combination of References is Improper

There is still another, mutually exclusive, and compelling reason why Saito and Kawai cannot be applied to reject claim 1 under 35 U.S.C. § 103.

§ 2142 of the MPEP also provides:

[t]he examiner must step backward in time and into the shoes worn by the hypothetical person of ordinary skill in the art when the invention was unknown and just before it was made. . . . Knowledge of the applicant's disclosure must be put aside . . . impermissible hindsight must be avoided.

Here, neither Saito and Kawai teaches, or even suggests, the desirability of the combination of claim 1 since neither teaches "forming a protective film portion over at least the exposed portion of the conductive layer, the protective film portion being comprised of the elements C, H and O;" as claimed in claim 1.

Thus, neither patent publication provides any incentive or motivation supporting the desirability of the combination. Therefore, there is no basis in the art for combining the references to support a 35 U.S.C. § 103 rejection of claim 1. In this context, the MPEP further provides at § 2143.01 that, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination."

In the above context, the courts have repeatedly held that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination.

In the present case it appears that the combination of Saito and Kawai arises solely from hindsight based on the invention without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 1. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness is not met, and the rejection under 35 U.S.C. § 103 is not applicable to claim 1.

3. The Recognition Of A Problem, Or Of The Source Of The Problem, Is Not Obvious Even Though The Solution To The Problem May Be Obvious

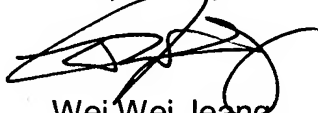
In the present case, it is apparent from a reading of the Saito patent and the Kawai patent that neither recognized the problem of resolving the dual damascene porous low-k surface roughness resulting from the liner removal process. Thus, this is an example of a solution to a problem being obvious only after recognition of the problem by the applicant and is part of the subject matter as a whole language of 35 U.S.C. § 103 (quoted above) which should always be considered in determining the obviousness of an invention under this statute.

Thus, for this independent reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness is not met, and the rejection under 35 U.S.C. § 103 should be withdrawn.

IV. Conclusion

The allowance of claims 1-22 is respectfully requested. The Examiner is invited to call the undersigned at the below-listed telephone number if a telephone conference would expedite or aid the prosecution and examination of this application.

Respectfully submitted,



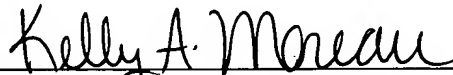
Wei Wei Jeang
Registration No. 33,305

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HAYNES AND BOONE, LLP
901 Main Street, Suite 3100
Dallas, Texas 75202-3789
Telephone: 972/739-8631
File: 24061.475

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on June 9, 2005.



Kelly A. Moreau